## PROPOSED AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

## **Listing of Claims:**

 (Currently Amended) A method in a computing system for preemptive determination of the potential for atypical clinical event occurrence related to the administering of at least one medication to a person having an electronic medical record (EMR), the method comprising the steps of:

> receiving a selection of the person from a list of patients displayed at a user interface window, wherein the list of patients is extracted from patientprocedure entries stored in a unified healthcare network, and wherein the patientprocedure entries associate the person with a medical procedure;

> utilizing the medical procedure associated with the selected person to interact with one or more pre-built medication-procedure tables;

> based on the interaction, accessing a list of possible medications, and dosages thereof, that are to be administered to the person for the medical procedure;

employing a control server to compare the medication list to information in the person's electronic medical record (EMR), wherein the EMR maintains dosage amounts of the medications the person is taking, foods the person is consuming, and allergies to medications the person is know-known to have;

determining whether\_that\_at least one match exists between any of the medications included in the list and the EMR information, wherein the match indicates the potential of an atypical clinical event occurring upon the associated

3915862 v1 Page 2 of 33

medication being administered to the person; and

when a match is determined to exist, outputting a response relating to each match, respectively, wherein the response indicates a specific medication involved in the match, a category of the specific medication, a type of match, and a severity of an associated atypical clinical event, and wherein the type of match

2. (Previously Presented) The method of claim 1, wherein the step of accessing a list of possible medications comprises accessing a list of possible medications that may be administered to a specific person scheduled to undergo a specific type of medical procedure, and wherein the step of employing a control server to compare the medication list

comprises comparing the medication list to information in the specific person's EMR.

is comprises at least one of drug-drug, drug-allergy, or drug-food.

- 3. (Original) The method of claim 1, wherein accessing a list of possible medications comprises accessing a list of possible medications that may be administered to any person scheduled to undergo a specific type of medical procedure, and further comprising the steps of selecting a person to undergo the medical procedure and receiving at least one of the medications from the list of medications.
- (Original) The method of claim 1, wherein the atypical clinical event is
  one selected from the group consisting of a drug-drug interaction, drug-food interaction, a drugallergy interaction, and a drug-gene interaction.
- (Original) The method of claim 1, wherein the medical procedure includes any medical procedure requiring the use of anesthesia.

3915862 v1 Page 3 of 33

- (Original) The method of claim 1, wherein the list of possible medications includes medications used in a medical procedure involving anesthesia.
- (Original) The method of claim 1, wherein the list of possible medications includes medications used in a radiologic medical procedure.
- (Original) The method of claim 1, wherein the list of possible medications includes medications used in an oncologic medical procedure.
  - 9. (Canceled).
- (Previously Presented) The method of claim 1, wherein the response includes a listing of the match and the associated atypical clinical event.
- 11. (Original) The method of claim 10, wherein the list of possible medications includes a dosage amount for each medication in the list, and wherein the response further includes an indication of the predicted severity of the atypical clinical event.
- 12. (Original) The method of claim 10, further comprising displaying information about at least one medication of the list of possible medications that is involved in the match upon selection of the medication at the response.
- (Original) The method of claim 1, wherein the list of possible medications is received over a communication network from a remote computing device.
  - 14. (Previously Presented) The method of claim 1, further comprising: selecting the person from the list of patients scheduled for a medical procedure; and

3915862 v1 Page 4 of 33

accessing the person's EMR prior to comparing the medication list to information in the person's EMR.

15. (Currently Amended) The method of claim 1, wherein the step of determining whether at least one match exists comprises:

querying a data structure containing information selected from one of the groups consisting of drug-drug interactions and drug-food interactions; and

determining whether-that at least one match correlates with one of the drug-drug interactions and drug-food interactions.

- 16. (Previously Presented) The method of claim 1, further comprising retrieving the person's (EMR) prior to comparing the medication list to information in the person's (EMR).
- 17. (Currently Amended) A method in a computing system for preemptive determination of the potential for atypical clinical event occurrence related to the administering of at least one medication to a person having an electronic medical record, the method comprising the steps of:

accessing medication-procedure tables that maintain specific sets of medications and dosages thereof that are administered for each of a plurality of medical procedures, wherein the medication-procedure tables include a universal set of medications that are particularly dangerous when administered in a variety of medical procedures;

selecting a pre-defined-list of possible-medications from the medicationprocedure tables that are to be administered to the person for a medical procedure

3915862 v1 Page 5 of 33

scheduled for the person, wherein the medication list includes a specific set of medications and dosages thereof that correspond to the medical procedure and the universal set of medications:

employing a control server to compare the medication list to-directly

against information in-extracted from the person's electronic medical record

(EMR);

determining whether-that at least one match exists between any of the selected medications included in the medication list and the EMR information, wherein the at least one match indicates the potential of drug-allergy reactions occurring upon-when the associated matching medication being is administered to the person:

employing the control server to compare the medication list to-against the information in the person's electronic medical record (EMR[[]]] upon being passed through an-a drug-drug association table and a drug-food association table, wherein the drug-drug association table includes information regarding adverse affects caused by medications interacting with each other, and wherein the drug-food association table includes information regarding adverse affects caused by a medication and a food interacting with each other:

determining whether\_that\_at least one match exists between any of the selected\_medications included in the medication\_list and the EMR information passed\_through\_upon employing the drug-drug and the drug-food\_association tables, wherein the match indicates the potential of drug-drug or food\_drug-drug-food\_reactions occurring upon the associated\_selected\_medication being administered to the person; and

3915862 v1 Page 6 of 33

CRNL110414

Application No. 10/748,046 Proposed Amendment Filed 04/07/2010 Reply to Office Action of 12/07/2009

when a match is determined to exist, outputting a response relating to each

match.

18. (Canceled).

19. (Original) The method of claim 17, wherein the medical procedure

includes any medical procedure requiring the use of anesthesia,

20. (Original) The method of claim 17, wherein the list of possible

medications includes medications used in a medical procedure involving anesthesia.

21. (Previously Presented) The method of claim 17, wherein the information

in the person's EMR includes a list selected from one of the groups consisting of medications the

person is currently taking or has recently taken, foods the person has consumed, the person's

allergies to medications and genetic test information for the person.

22. (Previously Presented) The method of claim 17, wherein the response

includes a listing of the match and an associated atypical clinical event, and wherein the atypical

clinical event is one selected from the group consisting of a drug-drug interaction, drug-food

interaction, drug-allergy interaction and a drug-gene interaction.

23. (Original) The method of claim 22, wherein the list of possible

medications includes a dosage amount for each medication in the list, and wherein the response

further includes an indication of the predicted severity of the atypical clinical event.

24. (Original) The method of claim 22, further comprising displaying

information about at least one medication of the list of possible medications that is involved in

the match upon selection of the medication at the response.

3915862 v1 Page 7 of 33

25. (Previously Presented) The method of claim 17, further comprising: selecting the person from a list of person's scheduled for a medical procedure; and

accessing the person's EMR prior to comparing the medication list to information in the person's EMR.

26. (Currently Amended) The method of claim 17, wherein the step of determining whether at least one match exists comprises:

querying the associated table containing information selected from one of
the groups consisting of drug-drug interactions and drug-food interactions; and
determining whether-that at least one match correlates with one of the

drug-drug interactions and drug-food interactions.

- 27. (Previously Presented) The method of claim 17, further comprising retrieving a specific person's EMR prior to comparing the medication list to information in the person's EMR.
- 28. (Previously Presented) The method of claim 17, further comprising modifying the medication list by adding or deleting medications from the list prior to comparing the medication list to information in the person's EMR.
- 29. (Currently Amended) A method in a computing system for preemptive determination of the potential for atypical clinical event occurrence related to the administering of at least one medication to a person having an electronic medical record, the method comprising the steps of:

3915862 v1 Page 8 of 33

accessing medication-procedure tables that maintain specific sets of medications and dosages thereof that are administered for each of a plurality of medical procedures;

selecting a pre-defined-list of possible-medications from the medicationprocedure tables that are to be administered to the person for a medical procedure scheduled for the person, wherein the medication list includes a specific set of medications and dosages thereof that correspond to the medical procedure;

employing a control server to compare the medication list to-directly against information in-extracted from the person's electronic medical record (EMR), wherein the extracted information includes a weight and an age of the person:

determining whether\_that\_at least one match exists between any of the selected\_medications included in the medication\_list and the EMR information, wherein the match indicates the potential of drug-allergy reactions occurring upon the associated\_selected\_medication being administered to the person;

employing the control server to compare the medication list to the information in the person's electronic medical record (EMR) upon being passed through an association table, wherein the association table includes information regarding adverse affects caused by medications interacting with each other and caused by a medication and a food interacting with each other;

determining whether at least one match exists between any of the medications included in the list and the EMR information passed through the association table, wherein the match indicates the potential of drug drug or food

3915862 v1 Page 9 of 33

drug reactions occurring upon the associated medication being administered to the person; and

when a match is determined to exist, generating an alert box for each match, wherein the alert box includes an indication of the selected medication from the medication list that is involved in the match and a predicted severity of adverse affects that result from administering the matching selected medication, wherein the predicted severity is based on the dosage of the selected matching medication, and the age and the weight of the person receiving the medical procedure; and

outputting a response relating to each match to a window on a display device, wherein the response includes presenting the alert box for each match within the window, and wherein the predicted severity for each match is presented as a graphical symbol that represents at least one of mild severity, moderate severity, or severe severity.

- 30. (Original) The method of claim 29, wherein the at least one medication is to be administered to the person prior to or during a medical procedure, and wherein the medication list includes a universal set of medications that may be administered regardless of the type of medical procedure.
- 31. (Previously Presented) The method of claim 29, further comprising, based on the determinations, selecting an atypical clinical event from the group consisting of a drugdrug interaction, drug-food interaction, a drug-allergy interaction, and a drug-gene interaction.

3915862 v1 Page 10 of 33

- 32. (Original) The method of claim 29, wherein the at least one medication is to be administered to the person prior to or during a medical procedure, and wherein the medical procedure includes any medical procedure requiring the use of anesthesia.
- 33. (Previously Presented) The method of claim 29, wherein the information in the person's EMR includes a list selected from one of the groups consisting of medications the person is currently taking or has recently taken, foods the person has consumed, the person's allergies to medications and genetic test information for the person.
- (Previously Presented) The method of claim 31, wherein the response includes a listing of the match and the associated atypical clinical event.
- 35. (Currently Amended) A computing system for preemptively determining the potential for atypical clinical event occurrence related to the administering of a medication to a person having an electronic medical record (EMR), the computer system comprising a processing device coupled to a computer storage medium, the computer storage medium having stored thereon a plurality of program components executable by the processing device, the program components comprising:

a receiving component that performs the following processes:-receives a list of possible medications that are administered for a medical procedure

(a) accessing medication-procedure tables that maintain specific sets of medications and dosages thereof that are administered for each of a plurality of medical procedures, wherein the medication-procedure tables include a universal set of medications that are particularly dangerous when administered in a variety of medical procedures; and

3915862 v1 Page 11 of 33

(b) selecting a list of medications from the medication-procedure tables that are to be administered to the person for a medical procedure scheduled for the person, wherein the medication list includes a specific set of medications and dosages thereof that correspond to the medical procedure and the universal set of medications;

a comparing component for comparing the medication list to directly

against information in extracted from the person's electronic medical record

(EMR):

a determining component that determines whether that a match exists between any of the <u>selected</u> medications included in the <u>medication</u> list and the EMR information, wherein the <u>at least one</u> match indicates the potential of drugallergy reactions occurring <u>upon-when</u> the <u>associated-matching</u> medication <u>being</u> is administered to the person;

the comparing component further configured to compare the medication list to-against the information in the person's electronic medical record (EMR[[])] upon being passed through an a drug-drug association table and a drug-food association table, wherein the drug-drug association table includes information regarding adverse affects caused by medications interacting with each other, and wherein the drug-food association table includes information regarding adverse affects caused by a medication and a food interacting with each other;

the determining component being further configured to determine whether that at least one match exists between any of the selected medications included in the medication list and the EMR information passed through upon employing the drug-drug and the drug-food association tables, wherein the match indicates the

potential of drug-drug or <u>food\_drug\_drug-food\_reactions</u> occurring upon the <u>associated\_selected\_medication\_being\_administered\_to\_the\_person;</u> and

an outputting component that outputs a response relating to each match.

- 36. (Original) The system of claim 35, wherein the receiving component receives a list of possible medications that may be administered to a specific person scheduled to undergo a specific type of medical procedure, and wherein the comparing component compares the medication list to information in the specific medical record.
- 37. (Original) The system of claim 35, wherein the receiving component receives a list of possible medications that may be administered to any person scheduled to undergo a specific type of medical procedure, and further comprising a selecting component for selecting a person to undergo the medical procedure and receive at least one of the medications from the list of medications.
- 38. (Previously Presented) The computing system of claim 35, wherein determining component is further configured to select an atypical clinical event from the group consisting of a drug-drug interaction, drug-food interaction, drug-allergy interaction and a druggene interaction.
- (Original) The computing system of claim 35, wherein the list of possible medications received includes medications used in a medical procedure involving anesthesia.
- (Original) The computing system of claim 35, wherein the list of possible medications received includes medications used in a radiologic medical procedure.

3915862 v1 Page 13 of 33

41. (Currently Amended) The computing system of claim 35, wherein the list

of possible medications received includes medications used in a oncologic an oncologic medical

procedure.

42. (Previously Presented) The computing system of claim 35, further

comprising a retrieving component that retrieves a specific person's EMR from a unified

healthcare system, and wherein information in the EMR includes a list selected from one of the

groups consisting of medications the person is currently taking or has recently taken, foods the

person has consumed the person's allergies to medications and genetic test information for the

person.

43. (Previously Presented) The computing system of claim 38, wherein the

outputting component includes a display component that displays the outputted response as a

listing of at least one of the matches and the associated atypical clinical event.

44. (Previously Presented) The computing system of claim 43, wherein the list

of possible medications received includes a dosage amount for each medication in the list, and

wherein the outputted response further includes an indication of the predicted severity of the

atypical clinical event.

45. (Original) The computing system of claim 44, further comprising a

selecting component for selecting a medication of the list of possible medications that is involved

in the match, and wherein the display component displays information about the selected

medication.

3915862 v1 Page 14 of 33

46. (Original) The computing system of claim 35, wherein the receiving component receives the list of possible medications to be administered over a communication network from a remote computing device.

## 47. (Canceled).

48. (Currently Amended) A computing system for preemptively determining the potential for atypical clinical event occurrence related to the administering of a medication to a person having an electronic medical record (EMR), the computer system comprising a processing device coupled to a computer storage medium, the computer storage medium having stored thereon a plurality of program components executable by the processing device, the program components comprising:

an accessing component that accesses medication-procedure tables that maintain specific sets of medications and dosages thereof that are administered for each of a plurality of medical procedures, and that selects a pre-defined-list of possible—medications from the medication-procedure tables that are to be administered to the person for a medical procedure scheduled for the person, wherein the medication list includes a specific set of medications and dosages thereof that correspond to the medical procedure;

- a comparing component for comparing the medication list to directly against information in extracted from the person's electronic medical record (EMR), wherein the extracted information includes a weight and an age of the person;
- a determining component that determines whether that a match exists between any of the selected medications included in the medication list and the

3915862 v1 Page 15 of 33

EMR information, wherein the match indicates the potential of drug-allergy reactions occurring upon the associated selected medication being administered to the person:

the comparing component further configured to compare the medication list to the information in the person's electronic medical record (EMR) upon being passed through an association table, wherein the association table includes information regarding adverse affects caused by medications interacting with each other and caused by a medication and a food interacting with each others.

the determining component being further configured to determine whether that at least one match exists between any of the medications included in the list and the EMR information passed through the association table, wherein the match indicates the potential of drug drug or food drug reactions occurring upon the associated medication being administered to the person; and

an outputting component that performs the operations comprising:

(a) generating an alert box for each match, wherein the alert box includes an indication of the selected medication from the medication list that is involved in the match and a predicted severity of adverse affects that result from administering the matching selected medication, wherein the predicted severity is based on the dosage of the selected matching medication, and the age and the weight of the person receiving the medical procedure; and

(b) outputting a response relating to each match to a window on a display device, wherein the response includes presenting the alert box for each match within the window, and wherein the predicted severity for

Application No. 10/748,046 Proposed Amendment Filed 04/07/2010 Reply to Office Action of 12/07/2009

each match is presented as a graphical symbol that represents at least one of mild severity, moderate severity, or severe severity.

49. (Previously Presented) The computing system of claim 48, wherein the determining component is further configured to select an atypical clinical event from the group consisting of a drug-drug interaction, drug-food interaction, drug-allergy interaction and a drug-

gene interaction.

 (Original) The computing system of claim 48, wherein the list of possible medications received includes medications used in a medical procedure involving anesthesia.

51. (Previously Presented) The computing system of claim 48, further

comprising a retrieving component that retrieves a specific person's EMR from a unified

healthcare system, and wherein information in the EMR includes a list selected from one of the

groups consisting of medications the person is currently taking or has recently taken, foods the

person has consumed the person's allergies to medications and genetic test information for the

person.

52. (Previously Presented) The computing system of claim 49, wherein the outputting component includes a display component that displays the outputted response as a

listing of at least one of the matches and the associated atypical clinical event.

53. (Original) The computing system of claim 52, wherein the list of possible medications received includes a dosage amount for each medication in the list, and wherein the outputted response further includes an indication of the predicted severity of the atypical clinical

event.

3915862 v1 Page 17 of 33

- 54. (Original) The computing system of claim 52, further comprising a selecting component for selecting a medication of the list of possible medications that is involved in the match, and wherein the display component displays information about the selected medication.
- 55. (Original) The computing system of claim 48, wherein the receiving component receives the list of possible medications to be administered over a communication network from a remote computing device.
  - (Canceled).
- 57. (Currently Amended) Computer storage media containing computerexecutable instructions that, when executed, perform a method for controlling a computing
  system for preemptive determination of the potential for atypical clinical event occurrence
  related to the administering of at least one medication to a person having an electronic medical
  record (EMR), the method comprising the steps of:

accessing medication-procedure tables that maintain specific sets of medications and dosages thereof that are administered for each of a plurality of medical procedures, wherein the medication-procedure tables include a universal set of medications that are particularly dangerous when administered in a variety of medical procedures;

selecting a receiving a list of possible medications from the medicationprocedure tables that are to be administered to the person for a medical procedure scheduled for the person, wherein the medication list includes a specific set of medications and dosages thereof that correspond to the medical procedure and the

3915862 v1 Page 18 of 33

## universal set of medications;

comparing the medication list to directly against information in extracted from the person's electronic medical record (EMR);

determining whether-that at least one match exists between any of the selected medications included in the medication list and the EMR information, wherein the at least one match indicates the potential of drug-allergy reactions occurring upon-when the associated matching medication being is administered to the person;

comparing the medication list to-against the information in the person's electronic-medical record (EMR[[])] upon being passed through an a drug-drug association table and a drug-food association table, wherein the drug-drug association table includes information regarding adverse affects caused by medications interacting with each other, and wherein the drug-food association table includes information regarding adverse affects caused by a medication and a food interacting with each other;

determining whether-that at least one match exists between any of the selected medications included in the medication list and the EMR information passed through-upon employing the drug-drug and the drug-food association tables, wherein the match indicates the potential of drug-drug or food drug-drug-food reactions occurring upon the associated—selected medication being administered to the person; and

<del>upon determining a match exists, outputting a response relating to each match.</del>

3915862 v1 Page 19 of 33

- 58. (Previously Presented) The computer storage media of claim 57, wherein receiving a list of possible medications comprises receiving a list of possible medications that may be administered to a specific person scheduled to undergo a specific type of medical procedure, and wherein comparing the medication list comprises comparing the medication list to information in the specific person's EMR.
- 59. (Previously Presented) The computer storage media of claim 57, wherein receiving a list of possible medications comprises receiving a list of possible medications that may be administered to any person scheduled to undergo a specific type of medical procedure, and further comprising selecting a person to undergo the medical procedure and receive at least one of the medications from the list of medications.
- 60. (Previously Presented) The computer storage media of claim 57, wherein the method further comprising selecting an atypical clinical event from the group consisting of a drug-drug interaction, drug-food interaction, a drug-allergy interaction, and a drug-gene interaction.
- (Currently Amended) The computer storage media of claim 57, wherein the[[.]] medical procedure includes any medical procedure requiring the use of anesthesia.
- 62. (Previously Presented) The computer storage media of claim 57, wherein the list of possible medications includes medications used in a medical procedure involving anesthesia.
- 63. (Previously Presented) The computer storage media of claim 57, wherein the list of possible medications includes medications used in a radiologic medical procedure.

3915862 v1 Page 20 of 33

64. (Currently Amended) The computer storage media of claim 57, wherein

the list of possible medications includes medications used in a oncologie an oncologic medical

procedure.

65. (Previously Presented) The computer storage media of claim 57, wherein

the information in the person's EMR includes a list selected from one of the groups consisting of

medications the person is currently taking or has recently taken, foods the person has consumed.

the person's allergies to medications and genetic test information for the person.

66. (Previously Presented) The computer storage media of claim 60, wherein

the response includes a listing of the match and the associated atypical clinical event.

67. (Previously Presented) The computer storage media of claim 66, wherein

the list of possible medications includes a dosage amount for each medication in the list, and

wherein the response further includes an indication of the predicted severity of the atypical

clinical event.

68. (Previously Presented) The computer storage media of claim 66, further

comprising displaying information about at least one medication of the list of possible

medications that is involved in the match upon selection of the medication at the response.

69. (Previously Presented) The computer storage media of claim 57, wherein

the list of possible medications is received over a communication network from a remote

computing device.

70. (Previously Presented) The computer storage media of claim 57, further

comprising:

3915862 v1 Page 21 of 33

selecting the person from a list of person's scheduled for a medical procedure; and

retrieving the person's EMR prior to comparing the medication list to information in the person's EMR.

- (Canceled).
- (Canceled).
- 73. (Currently Amended) Computer storage media containing computer-executable instructions that, when executed, perform a method for controlling a computing system for preemptive determination of the potential for atypical clinical event occurrence related to the administering of at least one medication to a person having an electronic medical record (EMR), the method comprising the steps of:

accessing medication-procedure tables that maintain specific sets of medications and dosages thereof that are administered for each of a plurality of medical procedures;

selecting a pre-defined-list of possible-medications from the medicationprocedure tables that are to be administered to the person for a medical procedure scheduled for the person, wherein the medication list includes a specific set of medications and dosages thereof that correspond to the medical procedure;

comparing the medication list to-directly against information in-extracted from the person's electronic medical record (EMR), wherein the extracted information includes a weight and an age of the person:

determining whether that at least one match exists between any of the

3915862 v1 Page 22 of 33

<u>selected</u> medications included in the <u>medication</u> list and the [[(]]EMR[[)]] information, wherein the match indicates the potential of drug-allergy reactions occurring upon the <u>associated\_selected\_medication</u> being administered to the person:

comparing the medication list to the information in the person's electronic medical record (EMR) upon being passed through an association table, wherein the association table includes information regarding adverse affects caused by medications interacting with each other and caused by a medication and a food interacting with each other;

determining whether that at least one match exists between any of the medications included in the list and the EMR information passed through the association table, wherein the match indicates the potential of drug drug or fooddrug reactions occurring upon the associated medication being administered to the person; and

upon determining a match exists, generating an alert box for each match, wherein the alert box includes an indication of the selected medication from the medication list that is involved in the match and a predicted severity of adverse affects that result from administering the matching selected medication, wherein the predicted severity is based on the dosage of the selected matching medication, and the age and the weight of the person receiving the medical procedure; and

outputting a response relating to each match to a window on a display device, wherein the response includes presenting the alert box for each match within the window, and wherein the predicted severity for each match is presented

as a graphical symbol that represents at least one of mild severity, moderate severity, or severe severity.